





int end = time(0)

Output
"Total time to play
these Games in
integer seconds
= " << end-beg
<< endl;

Function Call
scrnDsp(wins,
losses,SIZE,
nGames, numThrw,
mxThrw

Output Manipulation
fixed
setprecision(2)
showpoint

Output
"Total number of Games
= "
<< nGames << endl

Output
"Roll Wins Losses"
<< endl

int sWins=0,
sLosses=0;

**Declare and Initialize
In For Loop**
int sum=2

sum<SIZE

F

T

sWins+=wins[sum];
sLosses=losses[sum];

sum++

Output and Output Manipulation
setw(4) << sum <<setw(10)
<<wins[sum] <<setw(10)
<<losses[sum]<< endl;

Output and Output Manipulation

"Total wins and losses = "<<sWins+sLosses<<endl;

"Percentage wins = "

<<static_cast<float>(sWins)/nGames*PERCENT<<"%"<<endl

"Percentage losses = "

<<static_cast<float>(sLosses)/nGames*PERCENT<<"%"<<endl;

"Maximum number of throws in a game = "<<mxThrw<<endl;

"Average throw per game="

<<static_cast<float>(numThrw)/nGames<<endl;

"Ratio of Longest to shortest game = 10^"
<<log10(mxThrw)<<endl;

Function Call
fileDsp(wins,
losses,SIZE,
nGames, numThrw,
mxThrw

Output Manipulation
fixed
setprecision(2)
showpoint

File Output
"Total number of Games
=" << nGames << endl

File Output
"Roll Wins Losses"
<< endl

int sWins=0,
sLosses=0;

**Declare and Initialize
In For Loop**
int sum=2

sum<SIZE

F

T

sWins+=wins[sum];
sLosses=losses[sum];

sum++

File Output and Output Manipulation
setw(4) << sum <<setw(10)
<<wins[sum] <<setw(10)
<<losses[sum]<< endl;

File Output and File Output Manipulation

"Total wins and losses = "<<sWins+sLosses<<endl;

"Percentage wins ="

<<static_cast<float>(sWins)/nGames*PERCENT<<"%"<<endl

"Percentage losses ="

<<static_cast<float>(sLosses)/nGames*PERCENT<<"%"<<endl;

"Maximum number of throws in a game = "<<mxThrw<<endl;

"Average throw per game="

<<static_cast<float>(numThrw)/nGames<<endl;

"Ratio of Longest to shortest game = 10^"

<<log10(mxThrw)<<endl;

Closing file streams
in.close();
out.close();

return 0;
exit from main